

WHAT IS CLAIMED IS:

1. An arrester, comprising:

a housing having an inner bore;

a substantially cylindrical varistor body received in said inner bore of said housing, said varistor body is formed of at least one varistor element having a lateral outer surface and a length defined between first and second ends of said varistor body, and a first mating element extending outwardly from said outer surface and along substantially the entire length of said body;

a substantially rigid first support member received in said inner bore and disposed on said outer surface of said body, said first support member having a first mating surface corresponding to and engaging said first mating element of said body, thereby coupling said body and said first support member.

2. An arrester according to claim 1, wherein

a substantially rigid second support member is disposed on said outer surface of said varistor body and has a first mating surface that corresponds to and engages said first mating element of said varistor body.

3. An arrester according to claim 2, wherein

a slot is defined between said first mating surfaces of said first and second support members, respectively, said slot receives said first mating element of said varistor body.

4. An arrester according to claim 2, wherein

said first and second support members cover substantially entirely said outer surface of said varistor body.

5. An arrester according to claim 2, wherein

a second mating element extends from said outer surface of said varistor body;

and

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said first support member has a second mating surface opposite said first mating surface that corresponds to and engages said second mating element.

6. An arrester according to claim 5, wherein

a substantially rigid third support member is disposed on said outer surface of said varistor body and has a first mating surface that corresponds to and engages said second mating element of said varistor body.

7. An arrester according to claim 6, wherein

a slot is defined between said second mating surface of said first support member and said first mating surface of said third support member, said slot receives said second mating element of said varistor body.

8. An arrester according to claim 6, wherein

each of said first, second, and third support members is curved with respect to a central longitudinal axis of said varistor body to conform to the shape of said varistor body.

9. An arrester according to claim 6, wherein

each of said first, second, and third support members has a length substantially equal to said length of said varistor body.

10. An arrester according to claim 6, wherein

said first, second, and third support members cover substantially entirely said outer surface of said varistor body.

11. An arrester according to claim 6, wherein

a first vent is located between said first and second support members;

a second vent is located between said first and third support members; and

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a third vent is located between said second and third support members, whereby said first, second, and third vents allow venting of internal gases of said varistor element during fault conditions.

12. An arrester according to claim 6, wherein
a third mating element extends from said outer surface of said varistor body;
said second support element includes a second mating surface opposite said first mating surface of said second support element that corresponds to and engages said third mating element of said varistor body.

13. An arrester according to claim 12, wherein
said third support element includes a second mating surface opposite said first mating surface of said third support element that corresponds to and engages said third mating element of said varistor body.

14. An arrester according to claim 13, wherein
a slot is defined between said second mating surfaces of said second and third support members, respectively, said slot receives said second support member

15. An arrester according to claim 1, wherein
a second mating element extends from said outer surface of said varistor body;
and
said first support member has a second mating surface opposite said first mating surface that corresponds to and engages said second mating element.

16. An arrester, comprising:
a housing having an inner bore;
a substantially cylindrical varistor body received in said inner bore of said housing, said body is formed of at least one varistor element having an outer surface, a length defined between first and second ends of said varistor body, a longitudinal

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axis, and first, second, and third mating elements extending radially outwardly from said outer surface and along substantially the entire length of said varistor body;

substantially rigid first, second, and third support members received in said inner bore and disposed on said outer surface of said varistor body, and each of said first, second, and third support members having a length substantially equal to said length of said varistor body;

a first slot defined between said first and second support members, and said first slot receiving said first mating element of said varistor body;

a second slot defined between said first and third support members, and said second slot receiving said second mating element of said varistor body; and

a third slot defined between said second and third support members, and said third slot receiving said third mating element of said varistor body.

17. An arrester according to claim 16, wherein

each of said first, second, and third slots provides a vent for internal gases of said varistor element generated during fault conditions.

18. An arrester according to claim 16, wherein

each of said first, second, and third support members are curved about said longitudinal axis of said varistor body to conform to the shape thereof.

19. An arrester according to claim 18, wherein

said first, second, and third support members cover substantially the entire outer surface of said varistor body.

20. An arrester according to claim 16, wherein

each of said first, second, and third support members, respectively, includes opposite first and second sides;

said first side of said first support member is adjacent said first side of said second support member with said first slot being defined therebetween;

said second side of said first support member is adjacent said first side of said third support member with said second slot being defined therebetween; and

said second sides of each of said second and third support members, respectively, are adjacent to one another with said third slot being defined therebetween.

21. A method of making an arrester, comprising the steps of:

mating a plurality of substantially rigid support members with a substantially cylindrical mold core so that first mating elements of the mold core engage corresponding second mating elements, respectively, of the support members;

molding a housing around the support members and the mold core;

removing the mold core from the housing, thereby forming an inner bore of the housing; and

inserting a substantially cylindrical varistor body formed of a plurality of varistor elements into the inner bore of housing so that third mating elements of the body engage the second mating elements, respectively.

22. A method according to claim 21, wherein

the first mating elements of the mold core and third mating elements of the varistor body are substantially the same; and

the mold core and the varistor body are substantially the same size.

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